

# INTEGRATED ELECTRONIC CHIP AND INTERCONNECT DEVICE AND PROCESS FOR MAKING THE SAME

## Abstract

A method is described for forming an integrated structure, including a semiconductor device and connectors for connecting to a motherboard. A first layer is formed on a plate transparent to ablating radiation, and a second layer on the semiconductor device. The first layer has a first set of conductors connecting to bonding pads, which are spaced with a first spacing distance in accordance with a required spacing of connections to the motherboard. The second layer has a second set of conductors connecting to the semiconductor device. The first layer and second layer are connected using a stud/via connectors having spacing less than that of the bonding pads. The semiconductor device is thus attached to the first layer, and the first set and second set of conductors are connected through the studs. The interface between the first layer and the plate is ablated by ablating radiation transmitted through the plate, thereby detaching the plate. The connector structures are then attached to the bonding pads. This

method permits fabrication of a high-density packaged device with reduced cost.